

Appl. No. 09/831,462  
Atty.Docket No. 7943M  
Amdt. Dated June 17, 2004  
Reply to Final Office Action Dated March 29, 2004  
Customer Number 27752

7

### REMARKS

Claims 6, 16 and 17 are amended to define the polymeric surface active component of the present chewing gum compositions with even greater particularity. The claims now define the polymeric surface active agent component as being particulate and having specified properties, namely (i) a particle size such that it passes through a 2mm mesh and is retained by a 0.1mm and (ii) an aqueous solubility of at least 5g per 100ml at 25°C. The particulate nature of the polymeric surface active agent coupled with the aqueous solubility properties provide the present chewing gum compositions with a crunchy texture which lasts during the initial minutes of chewing and disappears over time without leaving a gritty residue. The sensory experience during chewing reinforces to the consumer the oral care benefit of the product which includes surface conditioning effects to a subject's oral cavity surfaces perceived as improved cleaning and smooth tooth feel impression. Support for this amendment is found in original Claims 1 to 5 and in the Specification particularly at Page 2, lines 1-18 and at Page 4 under the section Polymeric Surface Active Agent.

Method Claims 49 and 50 are amended to include the provision of a crunchy texture by the present chewing gum compositions in addition to surface conditioning benefits. It is believed these amendments do not involve any introduction of new matter. Consequently, entry of these amendments is believed to be in order and is respectfully requested. No additional claims fee is known to be due as a result of these amendments.

By these amendments, Claims 6-17 and 26 to 50 remain pending in the application.

### Claims Rejection Under 35 USC §102(b)/ §103(a)

Claims 6, 8 to 16 and 49 are rejected under 35 U.S.C. §102(b) as being anticipated by US 4,808,401 to Gaffar et al.

Claims 7, 17, 26 to 48 and 50 are rejected under 35 U.S.C. §103(a) as obvious over US 4,808,401 to Gaffar et al.

It is contended in the Office Action that each of the claimed surface conditioning effects and benefits inherently occurs when an individual chews the gum of Gaffar et al. since a polymeric surfactant such as a polyphosphate as presently claimed is present therein.

Appl. No. 09/831,462  
Atty. Docket No. 7943M  
Amtd. Dated June 17, 2004  
Reply to Final Office Action Dated March 29, 2004  
Customer Number 27752

8

Applicants respectfully traverse the Examiner's rejection of the claims under 35 USC §102(b) and 35 U.S.C. §103(a) and submit that the claims as amended are distinct and unobvious from the cited art.

Applicants submit that there is no disclosure or any suggestion in Gaffar et al. of the present polymeric surface active agents which are in particulate form of specified particle size and solubility characteristics in order to provide the chewing gum compositions with a crunchy texture which lasts during the initial minutes of chewing and which disappears over time without leaving a gritty residue. The crunchy texture and dissolution profile of the crunchy particulates are consumer noticeable and improve the acceptability of the chewing gum product, reinforcing the oral care benefit of the product while also providing improved intraoral cleaning and smooth tooth feel impression.

Gaffar does not teach or suggest all of Applicants' claim limitations and therefore, does not establish a *prima facie* case of obviousness (see MPEP 2143.03). Specifically, there is no disclosure or suggestion whatsoever in Gaffar to formulate chewing gum products with particulate polymeric surface active agents having specified particle size and aqueous solubility in order to provide such consumer-noticeable and desirable crunchy texture and chewing experience. Further there is no teaching or any suggestion whatsoever in Gaffar that such particulate polymeric surface active agent would reduce the astringency of metallic ions when formulated in the present chewing gum compositions but would not significantly reduce the efficacy of the metallic ions.

It is respectfully submitted that the present claimed technical effect and benefits derived from the particulate form and solubility characteristics of the polymeric surface active agent would not inherently result from the polyphosphates disclosed by Gaffar. Particle size of a substance and solubility profile of such particles are not inherent properties. Attention is respectfully directed to the holding in *In re Rijckaert*, 9 F.3d 1531, 28 USPQ 2d 1955 (Fed. Cir. 1993), wherein rejection of appellant's claims as inherent was reversed because the finding of inherency was based on what would result due to optimization of conditions, not what was necessarily present in the prior art. The Court decided that the finding of the Examiner and the Board that the optimal condition achieved by the appellant's invention was inherent in the prior art was not sufficient evidence of obviousness where the prior art failed to disclose the means to achieve that condition. The optimal condition was not implicitly or explicitly suggested in the prior art and thus no *prima facie* case of obviousness had been established. Further, the mere

Appl. No. 09/831,462  
Atty. Docket No. 7943M  
Arndt. Dated June 17, 2004  
Reply to Final Office Action Dated March 29, 2004  
Customer Number 27752

9

fact that a certain condition could result from a given set of circumstances was not sufficient to establish inherency. As in *Rijckaert*, the prior art (Gaffar) applied in the present case has no disclosure or suggestion whatsoever with respect to particulate polymeric surface active agents having a specified particle size and solubility characteristics to provide the claimed chewing gum product provided with a crunchy texture and dissolution profile during the chewing process.

Further, the C.C.P.A stated in *In re Cofer* 53 C.C.P.A. 830 (January 13, 1966),  
*"To be sure, whether a given chemical compound or composition has the same usefulness as closely related materials may be an important consideration in determining obviousness under 35 U.S.C.S. § 103. But it is only one consideration. Other factors which must be given weight in determining whether the subject matter as a whole would have been obvious include whether the prior art suggests the particular structure or form of the compound or composition as well as suitable methods of obtaining that structure or form. The new form of the compound set forth in the claims is as much a part of the "subject matter as a whole" to be compared with the prior art as are other properties of the material which make it useful."*

The rejection under U.S.C. 35 §103 of the *Cofer* claims to a chemical compound which is free-flowing and crystalline was reversed by the C.C.P.A. because there is no support in the record for the finding of the Examiner or the Board that the physical form (i.e., crystalline) of the claimed compound would have been obvious and further because insufficient weight was given to the various advantages derived from such crystalline form.

As in *Cofer*, Applicants submit that reference does not disclose or make obvious the physical form of the present polymeric surface active agents, being particles of specified size and solubility and the desirable results derived therefrom. Gaffar's disclosure focuses only on improving the anticalculus efficacy of hexametaphosphates by including in the composition a linear polymeric polycarboxylate to inhibit the salivary hydrolysis of the P—O—P bonds in the hexametaphosphate. There is absolutely no suggestion or motivation provided in Gaffar of using polyphosphates or any other polymeric surface active agent in particulate form to provide (1) a crunchy texture to the product which lasts throughout the initial minutes of mastication and which disappears

Appl. No. 09/831,462  
Atty. Docket No. 7943M  
Amdt. Dated June 17, 2004  
Reply to Final Office Action Dated March 29, 2004  
Customer Number 27752

10

over time leaving no gritty residue; (2) surface conditioning benefits resulting from altering the surface chemical characteristics of teeth and mucosal surfaces; (3) remarkable cleaning impression and positive mouthfeel effects for extended periods of time following use of the chewing gum; and (4) reduction of astringency conferred by metallic ion components without significantly reducing the efficacy of such metallic ions.

Applicants respectfully submit that Claims 6, 8 to 16 and 49 as now presented, are novel over Gaffar et al. Applicants further submit that Claims 7, 17, 26 to 48 and 50 are not obvious over Gaffar et al. There is no recognition in Gaffar of the desirability of providing a consumer-noticeable and desirable crunchy texture and dissolution properties to the chewing gum product and of changing the chemical surface characteristics of oral surfaces and thereby providing positive mouthfeel effects. Absent such recognition, Gaffar could not have made obvious the present claimed compositions and methods using a polymeric surface active agent such as a polyphosphate in particulate form of specific particle size and solubility to provide these benefits as well as the additional benefit of reducing astringency conferred by metallic ions if present

### CONCLUSION

Applicants have made an earnest effort to place their application in proper form and to distinguish their invention as now claimed from the applied reference. In view of the foregoing, reconsideration of this application, entry of the amendments presented, withdrawal of the claims rejection under 35 U.S.C. §102(b) and §103(a), and allowance of all application claims are respectfully requested.

Respectfully submitted,

Trevor Neil Day et al.

By Emelyn L. Hiland  
Emelyn L. Hiland  
Agent for Applicant(s)  
Registration No. 41,501  
(513) 622-3236

June 17, 2004